

In the Claims:

1. (Original): A method for alerting the pilot of an aircraft to a potentially hazardous condition comprising the steps of:
 - estimating a deceleration required to stop the aircraft on a runway of intended landing;
 - comparing said deceleration to a maximum deceleration of the aircraft, and
 - asserting an alert signal when said deceleration is greater than said maximum deceleration.
2. (Withdrawn): The method of claim 1 wherein said step of estimating deceleration further includes the step of including a gain factor in said deceleration to account for at least one of a plurality of runway surface conditions.
3. (Withdrawn): The method of claim 1 wherein said step of estimating deceleration further includes the step of including a gain factor in said deceleration to account for at least one atmospheric condition.
4. (Original): The method of claim 1 wherein said step of asserting an alert signal includes the step of commanding an autopilot go-around maneuver.
5. (Original): A method for alerting the pilot of an aircraft to a potential go-around condition comprising the steps of:
 - monitoring a plurality of parameters indicative of an unstabilized approach;
 - assigning a risk of go-around value according to each of said parameters; and
 - asserting an alert signal when said value exceeds a predetermined threshold amount.
6. (Withdrawn): The method of claim 5 wherein said step of monitoring a plurality of parameters includes the step of monitoring a change in a speed of the aircraft.
7. (Withdrawn): The method of claim 5 wherein said step of monitoring a plurality of parameters includes the step of monitoring a runway wind condition.

8. (Withdrawn): The method of claim 5 wherein said step of monitoring a plurality of parameters includes the step of monitoring a flight path angle of the aircraft.

9. (Original): The method of claim 5 wherein said step of monitoring a plurality of parameters includes the step of monitoring a position of the aircraft.

10. (Withdrawn): The method of claim 5 wherein said step of monitoring a plurality of parameters includes the step of monitoring a track of the aircraft.

11. (Original): The method of claim 5 wherein said step of asserting an alert signal comprises the step of commanding an autopilot go-around maneuver.

12. (Original): The method of claim 5 wherein said step of asserting an alert signal further comprises the steps of:

asserting a go-around caution alert signal when said value exceeds a first threshold amount and is less than a second threshold amount; and

asserting a go-around warning signal when said value exceeds said second threshold amount.

13. (Previously Presented): A method of alerting the pilot of an aircraft to a potential go-around condition comprising the steps of:

monitoring a plurality of parameters indicative of a runway landing length required;
assigning a risk of runway overrun value based on said plurality of parameters; and
asserting an alert signal when said risk value exceeds a predetermined threshold value,
wherein the plurality of parameters include runway length.

14. (Original): The method of claim 13 wherein said step of monitoring a plurality of parameters includes the step of monitoring a deceleration required to stop the aircraft.

15. (Withdrawn): The method of claim 13 wherein said step of monitoring a plurality of parameters includes the step of monitoring a runway surface condition.

16. (Withdrawn): The method of claim 13 wherein said step of monitoring a plurality of parameters includes the step of monitoring at least one atmospheric condition.

17. (Original): The method of claim 13 wherein said step of asserting an alert signal further comprises the steps of:

asserting a go-around caution alert signal when said value exceeds a first threshold amount and is less than a second threshold amount; and
asserting a go-around warning signal when said value exceeds said second threshold amount.

18. (Original): The method of claim 13 wherein said step of asserting an alert signal comprises the step of commanding an autopilot go-around maneuver.

19. (Original): A computer program product for alerting the pilot of an aircraft to a potentially hazardous condition comprising:

a computer readable storage medium having computer readable program code means embodied in said medium, said computer readable program code means having:

a first computer instruction means for estimating a deceleration required to stop the aircraft on a runway of intended landing;

a second computer instruction means for comparing said deceleration to a maximum deceleration of the aircraft; and

a third computer instruction means for asserting an alert signal when said deceleration is greater than said maximum deceleration.

20. (Original): The computer program product of claim 19 further including a fourth instruction means for asserting an autopilot go-around command when said alert signal is asserted.

21. (Original): A computer program product for alerting the pilot of an aircraft to a potential go-around condition comprising:

a computer readable storage medium having computer readable program code means embodied in said medium, said computer readable program code means having:

a first computer instruction means for accessing and monitoring a plurality of parameters indicative of an unstabilized approach;

a second computer instruction means for assigning a risk of go-around value according to each of said parameters; and

a third computer instruction means for asserting an alert signal when said value exceeds a predetermined threshold amount.

22. (Original): The computer program product of claim 21 further comprising a fourth instruction means for asserting an autopilot go-around command when said alert signal is asserted.

23. (Previously Presented): A computer program product for alerting the pilot of an aircraft to a potential go around condition comprising:

a computer readable storage medium having computer readable program code means embodied in said medium, said computer readable program code means having:

a first computer instruction means for accessing and monitoring a plurality of parameters indicative of a runway landing length required;

a second computer instruction means for assigning a risk of runway overrun value based on said plurality of parameters; and

a third computer instruction means for asserting an alert signal when said risk value exceeds a predetermined threshold value,

wherein the plurality of parameters include runway length.

24. (Original): The computer program product of claim 23 further including a fourth computer instruction means for asserting an autopilot go-around command when said alert signal is asserted.

25. (Original): An apparatus for alerting the pilot of an aircraft to a potential go-around condition comprising:

an input coupled to receive a plurality of parameters useful as indicators of an unstabilized approach;

an output; and

a signal processing device, coupled to said input, and to said output for:

assigning a risk of go-around value according to each of said parameters; and

asserting an alert signal when said value exceeds a predetermined threshold amount.

26. (Original): The apparatus of claim 25 wherein said apparatus comprises an Enhanced Ground Proximity Warning computer.

27. (Original): The apparatus of claim 25 wherein said alert signal further includes signals useful for driving a display.

28. (Original): The apparatus of claim 25 wherein said alert signal further includes an aural alert signal.

29. (Withdrawn): The apparatus of claim 25 wherein said parameters include a change in a speed of the aircraft.

30. (Withdrawn): The apparatus of claim 25 wherein said parameters include a runway wind condition.

31. (Withdrawn): The apparatus of claim 25 wherein said parameters include a flight path angle of the aircraft.

32. (Original): The apparatus of claim 25 wherein said parameters include a position of the aircraft.

33. (Withdrawn): The apparatus of claim 25 wherein said parameters include a track of the aircraft.

34. (Original): The apparatus of claim 25 wherein said alert signal comprises an autopilot go-around maneuver command.

35. (Withdrawn): The apparatus of claim 25 further including a database of runway data.

36. (Withdrawn): The apparatus of claim 25 wherein said parameters include runway data.
37. (Original): The apparatus of claim 25 wherein said parameters include terrain data.
38. (Previously Presented): An apparatus for alerting the pilot of an aircraft to a potential go-around condition comprising:
- an input coupled to receive a plurality of parameters useful as indicative of a runway landing length required;
 - an output; and
 - a signal processing device, coupled to said input and to said output, for:
 - assigning a risk of runway overrun value based on said plurality of parameters; and
 - asserting an alert signal when said risk value exceeds a predetermined threshold value,
- wherein the plurality of parameters include runway length.
39. (Original): The apparatus of claim 38 wherein said parameters include a deceleration required to stop the aircraft.
40. (Withdrawn): The apparatus of claim 38 wherein said parameters include a runway surface condition.
41. (Withdrawn): The apparatus of claim 38 wherein said parameters include at least one atmospheric condition.
42. (Original): The apparatus of claim 38 wherein said apparatus comprises an Enhanced Ground Proximity Warning computer.
43. (Original): The apparatus of claim 38 wherein said alert signal further includes signals useful for driving a display.
44. (Original): The apparatus of claim 38 wherein said alert signal further includes an aural alert signal.

45. (Original): The apparatus of claim 38 wherein said alert signal comprises an autopilot go-around maneuver command.

46. (Withdrawn): The apparatus of claim 38 further including a database of runway data.

47. (Withdrawn): The apparatus of claim 38 wherein said parameters include runway data.

48. (Original): The apparatus of claim 38 wherein said parameters include terrain data.

49. (Original): An apparatus for alerting the pilot of an aircraft to a potentially hazardous condition comprising:

an input coupled to receive runway data and at least one aircraft performance data;

an output; and

a signal processing device coupled to said input and to said output for:

estimating a deceleration required to stop the aircraft on a runway of intended landing;

comparing said deceleration to a maximum deceleration of the aircraft; and

asserting an alert signal when said deceleration is greater than said maximum deceleration.

50. (Withdrawn): The apparatus of claim 49 wherein said runway data includes at least one runway surface condition.

51. (Withdrawn): The apparatus of claim 49 wherein said input is further coupled to receive at least one atmospheric condition.

52. (Withdrawn): The apparatus of claim 49 wherein said input is further coupled to receive a runway end point data.

53. (Original): The apparatus of claim 49 wherein said alert signal includes an autopilot go-around maneuver command.

54. (Original): The apparatus of claim 49 wherein said alert signal further includes signals useful for driving a display.

55. (Original): The apparatus of claim 49 wherein said alert signal further includes an aural alert signal.

56. (Withdrawn): The apparatus of claim 49 further including a database of runway data.

57. (Original): The apparatus of claim 49 wherein said apparatus comprises an Enhanced Ground Proximity Warning computer.

58. (Withdrawn): The apparatus of claim 56 wherein said database further includes terrain data.

59. (Withdrawn): The apparatus of claim 46 wherein said database further includes terrain data.